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PATENT

Attorney Reference Number 3382-68602-01
Application Number 09/811,236

Remarks

A. Cited Art

U.S. Patent No. 6,546,419 to Humpleman et al. ("*Humpleman*") entitled "Method and Apparatus for User and Device Command and Control in a Network."

B. Background

Claims 25-34, 36-55, and 57-62 were rejected under 35 U.S.C. § 102(e) as being anticipated by *Humpleman*. Applicants have amended the following claims 25, 32, 33, 38, 42, 48, and 59. Claims 28-29, 43, 49, 54-55, 57, and 60-62 have been canceled, and Applicants have added 63-72. Thus, claims 25-27, 30-34, 36-42, 44-48, 50-53, 58-59, and 63-72 are pending in the application. The independent claims are 25, 32, 33, 38, 42, 48, and 51. Reconsideration of the application is respectfully requested in view of the foregoing amendments and following remarks.

C. Patentability of the Claims

35 U.S.C. § 102(e) - *Humpleman*

Applicants respectfully note that independent claims 25, 32, 33, 38, 42, 48, and 51 have been amended.

Furthermore, *Humpleman* does not teach or suggest all of the elements of the pending claims. For example, *Humpleman* does not teach or suggest "generating a service control protocol in accordance with the service control protocol definition to interact with the user-selectable service, wherein the service control protocol comprises plural network messages having a content and a sequence used to interact with the user-selectable service" as recited in claim 25. As described in the specification, implementations of the pending patent application involve "all (UPnP) Controlled Devices or Bridges) expos[ing] one or more Services that can be controlled remotely. Controlling such Services involves a message exchange between a User Control Point and the device. This message exchange happens according to a specific Service Control Protocol (SCP), which specifies the content and sequence of the messages exchanged." (Specification, page 44, lines 12-18).

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Moreover, "User Control Points are not required to have any prior knowledge of the SCPs required to control the Services on the various devices. Therefore, a Controlled Device or Bridge must be able to describe to a User Control Point the protocols required to control its Services, such that the User Control Point will be able to implement these protocols dynamically. This requires a standard way of declaring Service Control Protocols in a concise and unambiguous fashion. UPnP introduces a technique for declaring Service Control Protocols using a series of XML documents." (Specification, page 44, lines 19-26).

"As part of the Service Definition, a Service State Table and Command Set are defined. These things can be combined in a deterministic way defined by UPnP to produce a Service Control Protocol Definition (SCPD), which includes a Service Control Declaration and a Service Control Protocol. The SCPD is a representation of the schema of a Service." (Specification page 45, lines 1-5).

"The SCPD is directly embedded into the Description Document of a Controlled Device." When the Description Document, including the SCPD is uploaded into a User Control Point, data from the SCPD can be extracted to know how to generate service specific service control protocols. (Specification, page 45, lines 13-17)

The process of declaring Service Control Protocols involves "obtain[ing] a data description or declaration of the methods, properties and events of the remote service, as well as a definition of the protocol of network data messages through which the . . . methods, queries [are invoked] or . . . the properties [set]. . . . [T]his data description takes the form of the Description Document, which contains a Contract." (Specification, page 45, lines 25-27). For example, "[t]he Contract defines network data packets (e.g., XML data), request/response patterns, and protocol . . . via which the packets are exchanged. This information is sufficient . . . to exchange the appropriate network data packets to interact with the Controlled Device Service, including to invoke commands, query and set properties, and receive and respond to events, without download of any executable code to the User Control Point device and with a zero installation or configuration experience." (See Specification, page 45, line 27 – page 47, line 7).

Humpleman does state, however, that its "INTERFACE-A.XML [document] can also be used by a foreign Application such as Service B to determine the message format for Service A

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before communicating with the Service A.” (See *Humpleman*, col. 13, lines 3-6). *Humpleman*, however, does not specifically describe what is meant by message format.

In the previous paragraphs, *Humpleman* makes repeated references to the “formats capable of representing objects and their respective methods” for example, “C, XML, or other formats.” (*Humpleman*, col. 12, lines 38-40). Also, “[t]he second block provides a format for representation of an API in XML form for all devices.” (*Humpleman*, col. 12, lines 42-43). [D]uring run-time, incoming XML form method messages . . . from Service B are converted to the API format created by the compiled application C code for Service A.” (col. 12, lines 60-62). In each of these cases, *Humpleman* refers to the language format of the interface file, e.g., whether it is in an API format, XML format, C format, etc. Hence, the message format clearly differs from the “the service control protocol compris[ing] plural network messages having a content and a sequence” recited in claim 25. Thus, claim 25 is not anticipated by *Humpleman*, and is therefore in condition for allowance.

Independent claims 32, 33, 38, 42, 48, and 51 respectively recite “storing a dynamically discoverable definition of the computing device, the definition including *a set of instructions to define a network data messages protocol through which a series of network data messages are communicated* to access a service on the computing device”, “a second set of XML-based code strings that define one or more services exposed by the device, the second set of XML-based code strings including data to create service specific data messages, wherein the second set of XML-based code strings comprises: a service type element, a control URL element, an event subscription URL element, and *a service control protocol declaration element, wherein the service control protocol includes a contract to define interaction with the one or more services exposed by the device through plural network messages having a content and a sequence*”, “a service description written in an XML-based language to describe at least one service supported by the controlled device, the service description describing how to access the at least one service supported by the controlled device through a set of XML-based service strings, *the set of XML-based service strings comprising in part a network message protocol definition to describe interaction between the at least one service supported by the controlled device via plural network messages having a content and a sequence*”, “a description means, responsive to a description request received by the computing device on a network, for sending *a description message based on the description that defines interaction via data messaging with the computing*

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device over the network", "self-describing data stored in the memory and written in an XML-based language, the self-describing data describing how to operate the computing device and identifying a set of attributes of the computing device, *wherein a subset of the attributes define a service control protocol comprising a set of network messages having an attribute-defined content and an attribute-defined sequence*", and "multiple controlled devices configured to dynamically self-bootstrap onto the network, individual controlled devices comprising a device description to describe attributes of the computing device and a service description to describe one or more services exposed by the computing device, *the device and service descriptions defining a messaging protocol*, the device and service descriptions being written in an XML-based language." (Emphasis added). For at least similar reasons to the ones described above, Applicants believe these claims are in condition for allowance.

The remainder of the claims (26-27, 30-31, 33-34, 36-37, 39-41, 44-47, 50, 52-53, 58-59, and 63-72) depend from an independent claim and are therefore also in condition for allowance.

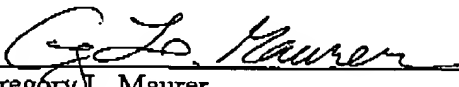
D. Conclusion

For at least the foregoing reasons, Applicants believe that the rejections asserted in the Office Action should be withdrawn. Therefore, claims 25-27, 30-34, 36-42, 44-48, 50-53, 58-59, and 63-72 are in condition for allowance and such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Respectfully submitted,

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